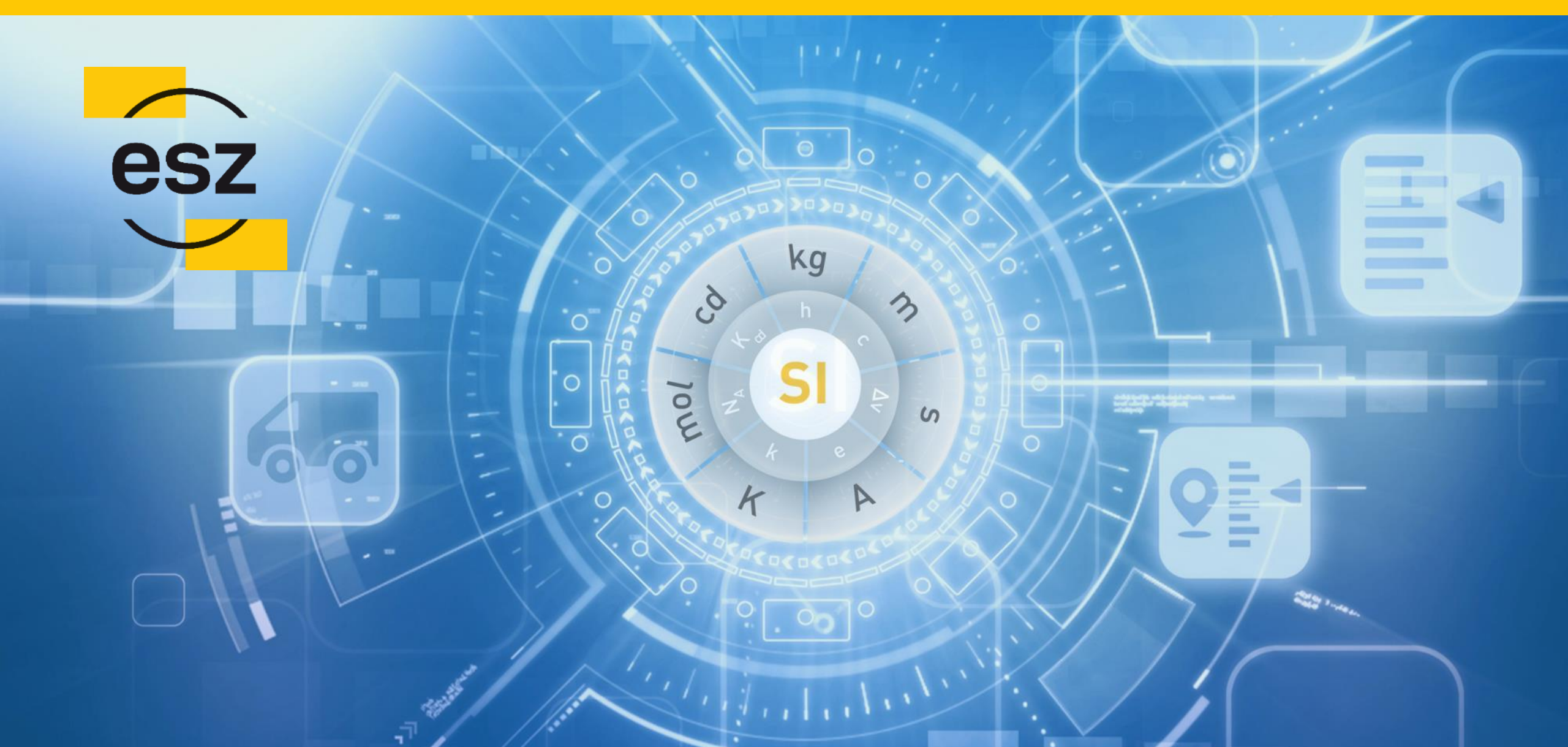




calibration & metrology



About us



Overview

- Europe`s largest owner managed metrology laboratory
- Established in 1976
- Manufacturer independent
- Accredited since 1997:

D-K-15019-01-00,
DIN EN ISO/IEC 17025:2018





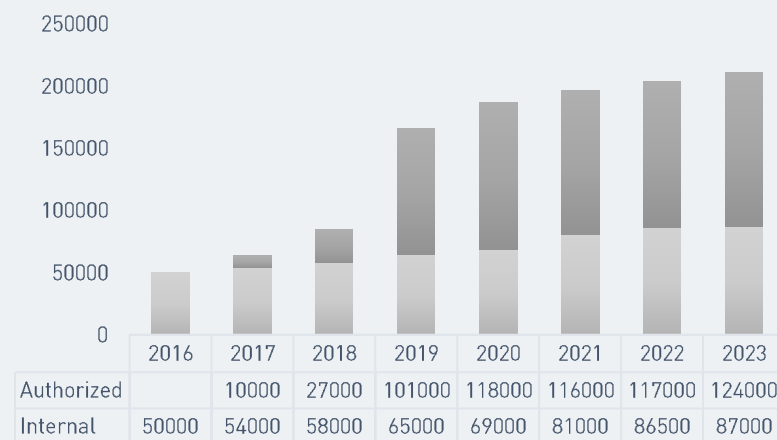
About us



esz AG in figures

- 25.000 satisfied customers
- 200.000 calibrations per year
- Over 200 accredited quantities
- 45 years of experience
- 7 locations in Europe
- 243 employees
- 2 mio Euro annual investment

Calibrations



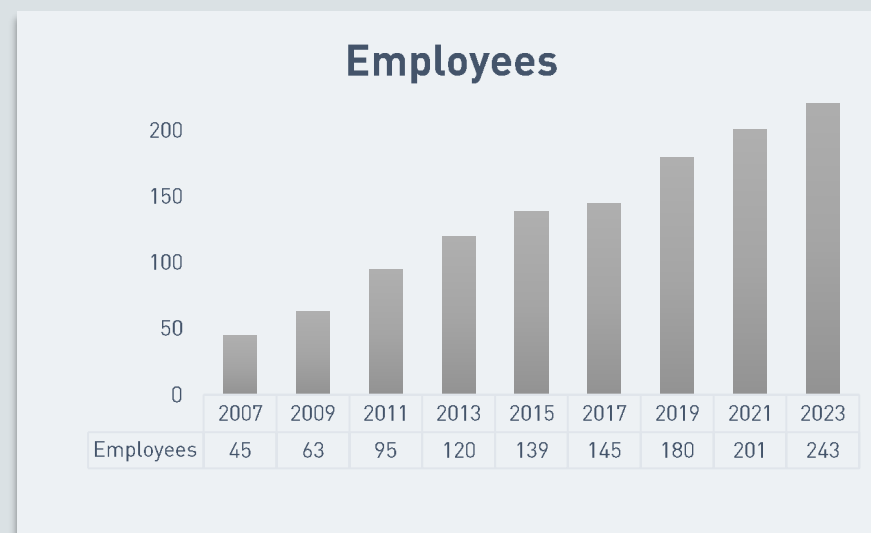


About us



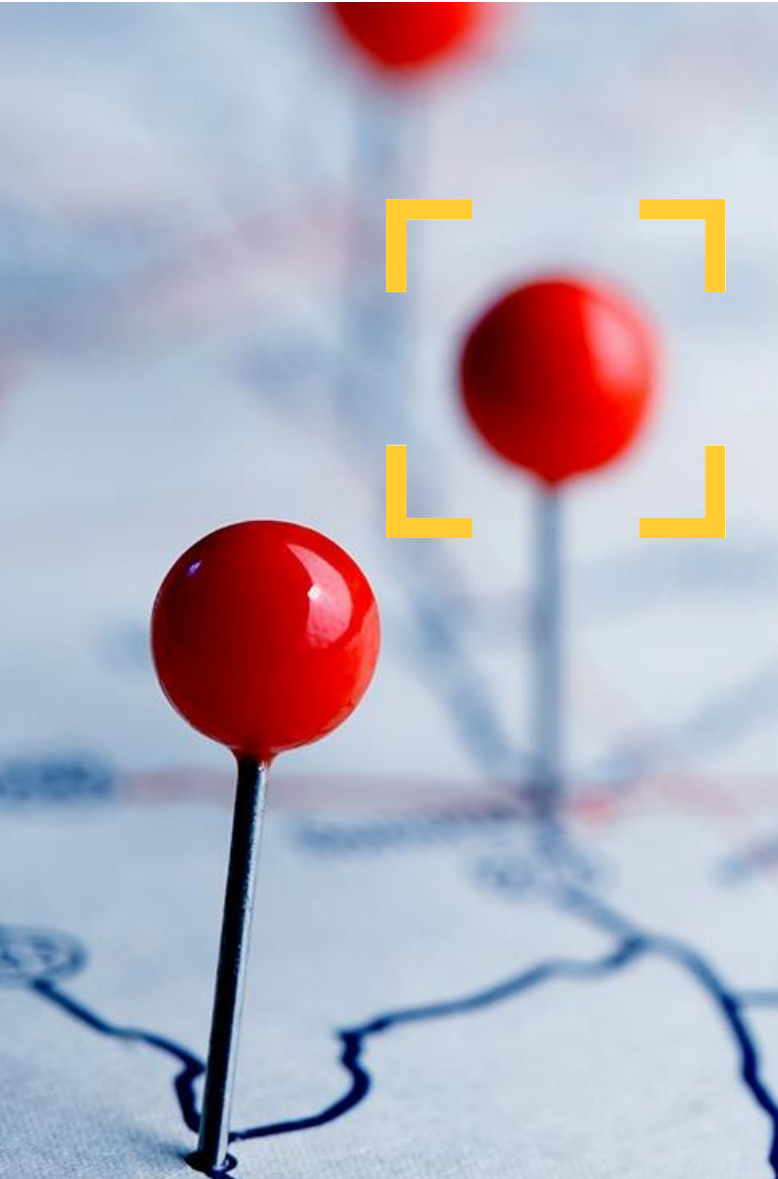
Teamwork – Our employees

- 243 employees at 7 locations
- Colleagues from 20 nations
- Continuous growth (2009: 63 > 2023: 201)
- Above-average period of employment
- High level of expertise





Our locations



Here you find esz AG

- Eichenau (Headquarter)
- Nuremberg
- Mannheim
- Steinfurt
- Berlin
- Vienna (Austria)
- Budapest (Hungary)





Business Units



Calibration

- Accredited:
DAkKS D-K-15019-01-00
DIN EN ISO/IEC 17025:2018
- Factory calibration /
ISO-compliant calibration
- Customized
- CEPS:
Calibration Expert Partner System



Software

- **calibration expert:** Calibration management
- **aePLUS:** Test & Measurement equipment management



Service

- On-site
- Repair
- Safety inspection / DGUV-V3
- Consulting
- Training
- Pick-up and delivery service
- Tool Control Systems
- Equipment leasing
cooperation with

 **ElectroRent**



Industries



Customers & Markets



Medical Technology



Telecommunications



Automotive



Automotive inspection bodies



Environment



Aviation



Mechanical Engineering



Electronics



IT / Software



Transportation / Logistics



Energy



Deutsche Akkreditierungsstelle GmbH

Befähigung gemäß § 8 Absatz 1 AkkStelleG i.V.m. § 1 Absatz 1 AkkStelleGBV
Unterzeichnerin der Multilateralen Abkommen
von EA, ILAC und IAF zur gegenseitigen Anerkennung

Akkreditierung



Die Deutsche Akkreditierungsstelle GmbH bestätigt hiermit, dass das Kalibrierlaboratorium

esz AG calibration & metrology
Max-Planck-Straße 16, 82223 Eichenau

die Kompetenz nach DIN EN ISO/IEC 17025:2018 besitzt, Kalibrierungen in folgenden Bereichen durchzuführen:

Elektrische Messgrößen
Gleichstrom- und Niederfrequenzmessgrößen
Zeit und Frequenz

Hochfrequenz- und Strahlungsmessgrößen
Hochfrequenzmessgrößen
Optische Messgrößen

Thermodynamische Messgrößen
Temperaturmessgrößen
Feuchtemessgrößen

Mechanische Messgrößen
Druck
Kraft
Drehmoment
Messgeräte im Kraftfahrzeugwesen (MIK)
Durchflussmessgrößen
Dimensionelle Messgrößen
Länge
Winkel

Die einzelnen Messgrößen sind in der Anlage enthalten.

Die Akkreditierungsurkunde gilt nur in Verbindung mit dem Bescheid vom 24.11.2020 mit der Akkreditierungsnummer D-K-15019-01. Sie besteht aus diesem Deckblatt, der Rückseite des Deckblatts und der folgenden Anlage mit insgesamt 81 Seiten.

Registrierungsnummer der Urkunde: D-K-15019-01-00

Berlin, 24.11.2020

Im Auftrag Dr. Heiko Manke
Abteilungsleiter

Die Urkunde samt Anlagenanlage gibt den Stand zum Zeitpunkt des Ausstellungsdatums wieder. Der jeweils aktuelle Stand des Geltungsbereiches der Akkreditierung ist der Datenbank akkreditierter Stellen der Deutschen Akkreditierungsstelle GmbH (DAKKS) zu entnehmen. <https://www.dakks.de/content/datenbank/akkreditierter-stellen>

Seiten 1 von 81 der Rückseite



Electrics



Optics



Acoustics



Mechanics



Flow



Pressure



Temperature



Humidity



Force



Mass



Torque



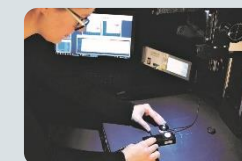
Acceleration



Medical Technology



KFZ test benches



Illuminance

With over 200 accredited quantities, esz AG is one of the leading laboratories in Europe. The scope of accreditations is growing every year.



Calibration



DAkkS- and ISO-Calibration

- DAkkS accredited calibration
- ISO calibration according to the requirements of DIN EN ISO/IEC 17025:2018
- Traceability, specifications and quality characteristics, conformity assessment, procedures and requirements are identical
- Fast and flexible order processing in own laboratories
- Calibration certificate available digitally as pdf document (full version) and/or as paper document (short version)

esz calibration & metrology

accredited by the Deutsche Akkreditierungsstelle (DAkkS)
Member of the Deutschen Kalibrierdienst

Calibration Certificate No. 405364-01

Object: Digital Multimeter
Keysight 34401A

Serial No.: 123456789

Customer: esz Marketing
Max-Planck-Str. 16
82223 Eicheneau

esz ID: 405364

Test Equipment No.: n.a.

Inventory No.: n.a.

Customer Ref. No.: P0123456

Order No.: C02021

Traceability: This calibration is in accordance with the System of Units, system, principles 17025 are accreditation agreements of the International Labor recognition of call

Date of Calibration: 2021-01-26

Next Calibration: 2022-01

Approved by: Andreas Böck
Laboratory Manager

Person in Charge

Philip M. Fleischmann Katharina Schreck



esz calibration & metrology

Calibration Certificate No. 405364-02

Object: Digital Multimeter
Keysight 34401A

Serial No.: 123456789

Customer: esz Marketing
Max-Planck-Str. 16
82223 Eicheneau

esz ID: 405364

Test Equipment No.: n.a.

Inventory No.: n.a.

Customer Ref. No.: P0123456

Order No.: C02021

Traceability: This calibration certificate documents the traceability to the International System of Units (SI, Systeme international d'unités). Quality management system, principles and calibration procedures comply with DIN EN ISO/IEC 17025. The calibration fulfills the requirements according to DIN EN ISO 9001 ff. or other comparable quality management guidelines.

Date of Calibration: 2021-01-27

Next Calibration: 2022-01

Approved by: Andreas Böck
Laboratory Manager

Person in Charge

Philip M. Fleischmann Katharina Schreck





Calibration Certificate



Digital Calibration Certificate

- Full evaluation with detailed measurement data
- Download with QR code or certificate data via
 - esz-calibration certificate portal: www.esz-ag.de/kalibrierscheindownload
 - Test equipment management software aePLUS
 - Link within the e-mail order confirmation

esz calibration & metrology

akkreditiert by the Deutsche Akkreditierungsstelle (DAKkS)
Member of the Deutschen Kalibrierdienst

Calibration Certificate No. 405364-01

Object: Digital Multimeter
Keysight 34401A

Serial No.: 123456789

Customer: esz Marketing
Max-Planck-Str. 16
82223 Eicheneau

esz ID: 405364

Test Equipment No.: n.a.

Inventory No.: n.a.

Customer Ref. No.: P0123456

Order No.: C02021

Traceability: This calibration is in accordance with the System of Units, principles, 17025 are accreditation agreements of the International Laboratory Recognition of Calibration

Date of Calibration: 2021-01-26

Next Calibration: 2022-01-27

Approved by: Andreas Böck
Laboratory Manager

Person in Charge: Philipp M. Fleischmann Katharina Schreck

Calibration Certificate No. 405364-02

Object: Digital Multimeter
Keysight 34401A

Serial No.: 123456789

Customer: esz Marketing
Max-Planck-Str. 16
82223 Eicheneau

esz ID: 405364

Test Equipment No.: n.a.

Inventory No.: n.a.

Customer Ref. No.: P0123456

Order No.: C02021

Traceability: This calibration certificate documents the traceability to the International System of Units (SI, Systeme international d'unités). Quality management system, principles and calibration procedures comply with DIN EN ISO 9001:2015. The calibration fulfills the requirements according to DIN EN ISO 9001:2015, or other comparable quality management guidelines.

Date of Calibration: 2021-01-27

Next Calibration: 2022-01-27

Approved by: Andreas Böck
Laboratory Manager

Person in Charge: Philipp M. Fleischmann Katharina Schreck

000000-00
esz AG
2019-07
Next Cal.:
2022-07

esz AG calibration & metrology
Max-Planck-Str. 16 | D-82223 Eicheneau | +49 (0) 89 30000-2 | info@esz-ag.de | www.esz-ag.de

Report Review: 405364-02-2 (Implying all pre-reviews) 2021-01-18
Digital copies were generated automatically and are digitally signed.

1/1



Calibration Certificate



Calibration Certificate No. 405364-01

Object: Digital Multimeter
Serial No.: 34401A
Customer: Max-Planck-Str. 16
Order No.: 405364-01
Date of Calibration: 2021-01-27

Calibration Certificate No. 405364-02

Object: Digital Multimeter
Serial No.: 34401A
Customer: Max-Planck-Str. 16
Order No.: 405364-02
Date of Calibration: 2021-01-27

In detail

- Identical service level for accredited or non-accredited calibrations
 - Traceability, specifications and quality characteristics, conformity assessment, procedures as well as requirements
 - Difference: Cover sheet of the calibration certificate

3. Ambient Conditions
Temperature 22.6 to 22.9 °C ±1 K
Relative Humidity 27 to 29 % ±3 %
Barometric Pressure 953 mbar ±5 mbar

4. Test Conditions
Acquisition method: MetCal
Preset(s) before calibration: automated 34401A R1.4 (5700,395/33220A)
Electronic zero adjustment
max. accuracy
self-test
GPIB ADDR: 01
6,5 Digit
Front panel

5. Place of Calibration
Max-Planck-Straße 16
82223 Eichenau
Germany

esz AG calibration & metrology
Max-Planck-Str. 16 | D-82223 Eichenau | +49-8141-88887-0 | info@esz-ag.de | www.esz-ag.de

Live monitoring of the ambient conditions

- Real-time readings of temperature, humidity, air pressure
- Accurate evaluation during calibration in the esz laboratory



Calibration Certificate



In detail

Detailed traceability information

- Representation of the uninterrupted traceability chain of the calibration equipment and standards
- Guaranteed metrological traceability to the SI system of units or to the underlying metrological standards

Graphic chart for each specified measurement step

- Representation as a line diagram
- Compliance with the tolerances of the device under test relative to the nominal value at a glance

1. Device Under Test

Manufacturer: Keysight
Model: 34401A
Model type: Digital Multimeter
Application(s): AC
DC
Type: benchtop device
Inspection equipment No.: n.a.
Inventory No.: n.a.

All stated measurement and test results relate only to the item mentioned above.

2. Calibration Procedure

- Direct measurement procedure using fixed standards or a variable AC/DC-source according to QMH III.1
- Frequency calibration at an external synchronized generator according to esz QMH VIII.1.2

Calibration procedure revision: 1.0, approved 2015-09-24 by Wilhelm Sandmeier

Calibration equipment and standards:

Standards	Manufacturer Model	Device	Traceable to	Cal. no.	Last cal.	Next cal.
034195 018038 116398	Fluke 5700A Precision Test Systems GPS10wR esz 4-Wire-Cu Short	Calibrator Frequency Standard Short	D-K-15019-01-00 D-K-15019-01-00	034195-14 018038-01 116398-01	2021-01 2022-01 2024-01	2022-01 2024-01 2026-01

Auxiliary equipment and devices:

Aux. devices	Manufacturer Model	Device	Traceable to	Cal. no.	Last cal.	Next cal.
063278	Agilent 33220A	Function Generator	D-K-15019-01-00	063278-08	2020-06	2021-06

DC-Resistance

Zero Offset Tests, 4-Wire

Range	Nominal value	Measured value	Specification	Deviation	%TOL	MU	Rem.	Diagram
10k	0.0000	0.0000	±0.02	0.0000	0%	0.000×10^{-2}		100
1k	0.0000	0.0000	±0.01	0.0000	0%	0.000×10^{-2}		100
100	0.0000	0.0000	±0.01	0.0000	0%	0.000×10^{-2}		100
10k	0.0000	0.0000	±0.01	0.0000	0%	0.000×10^{-2}		100
1k	0.0000	0.0000	±0.01	0.0000	0%	0.000×10^{-2}		100
100	0.0000	0.0000	±0.01	0.0000	0%	0.000×10^{-2}		100

DC-Voltage

Range	Nominal value	Measured value	Specification	Deviation	%TOL	MU	Rem.	Diagram
100mV	100.000mV	100.000mV	±0.005% ±0.005mV	0.0000	0%	1.0×10^{-6}		100
10mV	10.000mV	10.000mV	±0.005% ±0.005mV	0.0000	0%	1.0×10^{-6}		100
1V	1.00000V	1.00000V	±0.005% ±0.005mV	0.0000	0%	1.0×10^{-6}		100
10V	10.0000V	10.0000V	±0.005% ±0.005mV	0.0000	0%	1.0×10^{-6}		100
100V	100.000V	100.000V	±0.005% ±0.005mV	0.0000	0%	1.0×10^{-6}		100
1000V	1000.00V	1000.00V	±0.005% ±0.005mV	0.0000	0%	1.0×10^{-6}		100

esz AG calibration & metrology

Max-Planck-Str. 16 D-85773 Freising +49-89-311-8882-0 info@esz-ag.de www.esz-ag.de

Report Revision 0304454 (improving all previous ones), 2021-05-18
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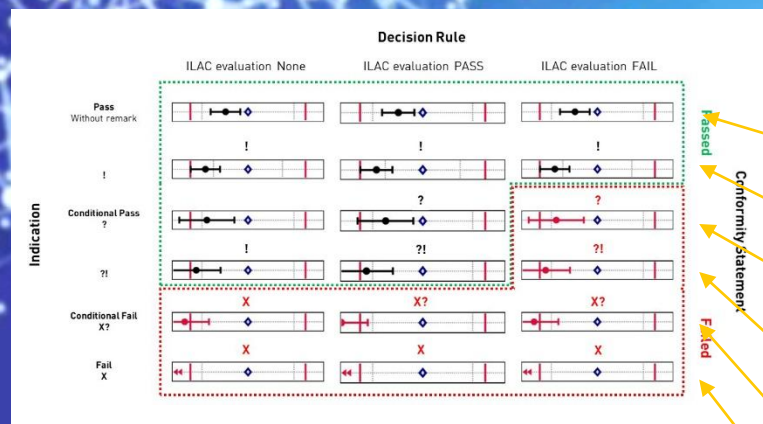
Calibration Certificate



Conformity statement

■ Detailed risk evaluation

- Verification of the specific risk of the conformity statement for each measurement step for accredited calibrations (DAkkS) or factory calibrations (ISO).
- Six cases can occur:
 - **Without remarks:** >95 % probability of being within the specification (ILAC G8:09/2019 Fig.5, Pass)
 - **!:** Warning threshold exceeded, >95 % probability of being within the specification
 - **?:** with a probability of >50% to 95% of being within the specification, taking into account the measurement uncertainty (MU) (ILAC G8:09/2019 Fig.5, Conditional Pass)
 - **?!:** above the warning threshold exceeded but with a probability of >50% to 95% of being within the specification, taking into account the MU
 - **X?:** with a probability of >50% to 95% of being outside the specification (ILAC G8:09/2019 Fig.5, Conditional Fail), taking into account the MU
 - **X:** >95% probability of being outside the specification (ILAC G8:09/2019 Fig.5, Fail)





Calibration Certificate



Conformity statement

Decision Rules

- Selected “ILAC evaluation” defines the decision rule and indication for each measuring step
- FAIL:** Decision rule according to DIN EN ISO 14253-1:2018-5.2 (on customer request). Measurement results according to ILAC-G8:09/2019 Fig. 5, Pass are assessed as conforming to the specifications. Cases according to ILAC-G8:09/2019 Fig. 5, Conditional Pass, Conditional Fail and Fail are not considered to comply with the specifications.
- PASS:** Standard decision rule according to the QM system of esz AG. Measurement results according to ILAC-G8:09/2019 Fig. 5, Pass und Conditional Pass are assessed as conforming to the specifications. Cases according to ILAC-G8:09/2019 Fig. 5, Conditional Fail und Fail are not considered to comply with the specifications.
- None:** Decision rule according to ILAC evaluation „PASS“ but without risking, i.e. question marks do not show during calibration and in the calibration certificate.

Decision Rule		ILAC evaluation None	ILAC evaluation PASS	ILAC evaluation FAIL	Conformity Statement
Indication					
Pass Without remark	!	!	!	!	Passed
Conditional Pass ?	!	?	?	?	
Conditional Fail X?	!	?	?	?	
Fail X	X	X	X	X	Failed



Calibration Certificate



Detailed reporting

■ Comprehensive data and terms in all esz calibration certificates

- Deviation: Difference between measured value and nominal value
- Rem.: Indication per measurement (ILAC evaluation)
- Intervention/warning threshold: 80 % of specification per default, adaptable to customer requirements
- Statement of Conformity: statement whether given results meet specified requirements or not (successful conformity assessments per measurement step)
- MU: Measurement uncertainty, determined according to EA-4/02 M:2013
- Specification: Definition of the properties of a device by the user:
 - %rdg: Percent of measured value
 - D: Digit (least significant digit of the display)
 - FS: Full Scale (range end value)
 - ppm: parts per million (10^{-6})
 - ppb: parts per billion (10^{-9})
 - rdg: reading (display)

Calibration Mark: AIB364/01-D46-15019-201401

Function Test	
Test	Result
Self-Test	PASS

DC-Current Zero Offset Tests (Front Inputs)									
Range	Nominal value	Measured value	Specification	Deviation	%TOL	MU	Rem.	Diagram	Diagram
10 mA	0.0000 mA	0.0001 mA	+300 NPS	0.0001 mA	0.1%	3.000×10^{-3} mA	●		
100 mA	0.0000 mA	-0.0001 mA	+300 NPS	-0.0001 mA	0.1%	3.000×10^{-3} mA	●		
1 A	0.00000 A	0.00000 A	+300 NPS	0.00000 A	0.1%	3.000×10^{-3} A	●		
10 A	0.0000 A	0.00001 A	+300 NPS	0.00001 A	0.1%	3.000×10^{-3} A	●		

DC-Voltage Zero Offset Tests									
Range	Nominal value	Measured value	Specification	Deviation	%TOL	MU	Rem.	Diagram	Diagram
10 mV	0.0000 mV	0.0000 mV	+300	0.0000 mV	0.1%	6.000×10^{-3} mV	●		
1 V	0.00000 V	0.00000 V	+30	0.00000 V	0.1%	6.000×10^{-3} V	●		
10 V	0.0000 V	0.0000 V	+5 D	0.0000 V	0.1%	6.000×10^{-3} V	●		
100 V	0.0000 V	0.0000 V	+4 D	0.0000 V	0.1%	6.000×10^{-3} V	●		
1000 V	0.000 V	0.000 V	+180	0.000 V	0.1%	6.000×10^{-3} V	●		

esz AG calibration & metrology

Max Planch-St-16 D-92225 Eichenau +49 8143 8887-0 v16@esz-ag.de 09042-0346

Report created: 08.04.2014 14:00:00, 2017-10-18
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4/11



Additional Services



Calibration certificates with customer logo

- Available on request for accredited calibrations (DAkkS) and factory calibrations (ISO)

esz calibration & metrology

akkreditiert durch die Deutsche Akkreditierungsstelle (DAkkS)
Mitglied des Deutschen Kalibrierdienstes

DKD

Calibration Certificate No. 405364-01

Object: Digital Multimeter
Keysight 34401A

Serial No.: 123456789

Customer: esz Marketing
Max-Planck-Str. 16
82223 Eichenau

esz ID: 405364

Test Equipment No.: n.a.

Inventory No.: n.a.

Customer Ref. No.: P0123456

Order No.: C02021

Traceability: This calibration is traceable to the International System of Units (SI), Systeme international d'unités. Quality management system, principles and calibration procedures comply with DIN EN ISO 9001:2015. The calibration fulfills the requirements according to DIN EN ISO 9001:2015 or other comparable quality management guidelines.

Date of Calibration: 2021-01-26

Next Calibration: 2022-01

Approved by: Andreas Böck
Laboratory Manager

Person in Charge

Philip M. Fleischmann Katharina Schreck

esz AD calibration & metrology
Max-Planck-Str. 16 D-82223 Eichenau

Report Revision: 405364-01 (Impression of previous version: 2021-01-26)
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esz calibration & metrology

akkreditiert durch die Deutsche Akkreditierungsstelle (DAkkS)
Mitglied des Deutschen Kalibrierdienstes

DKD

Calibration Certificate No. 405364-01

Object: Digital Multimeter
Keysight 34401A

Serial No.: 123456789

Customer: esz Marketing
Max-Planck-Str. 16
82223 Eichenau

esz ID: 405364

Test Equipment No.: n.a.

Inventory No.: n.a.

Customer Ref. No.: P0123456

Order No.: C02021

Traceability: This calibration certificate documents the traceability to the International System of Units (SI), Systeme international d'unités. Quality management system, principles and calibration procedures according to DIN EN ISO 9001:2015 are accredited by the DAkkS. The DAkkS is signatory to the multilateral agreements of the European co-operation for Accreditation (EA) and of the International Laboratory Accreditation Cooperation (ILAC) for the mutual recognition of calibration certificates.

Date of Calibration: 2021-01-26

Next Calibration: 2022-01

Approved by: Andreas Böck
Laboratory Manager

Person in Charge

Philip M. Fleischmann Katharina Schreck

esz AD calibration & metrology
Max-Planck-Str. 16 D-82223 Eichenau

Report Revision: 405364-01 (Impression of previous version: 2021-01-26)
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esz calibration & metrology

akkreditiert durch die Deutsche Akkreditierungsstelle (DAkkS)
Mitglied des Deutschen Kalibrierdienstes

DKD

Calibration Certificate No. 405364-02

Object: Digital Multimeter
Keysight 34401A

Serial No.: 123456789

Customer: esz Marketing
Max-Planck-Str. 16
82223 Eichenau

esz ID: 405364

Test Equipment No.: n.a.

Inventory No.: n.a.

Customer Ref. No.: P0123456

Order No.: C02021

Traceability: This calibration certificate documents the traceability to the International System of Units (SI), Systeme international d'unités. Quality management system, principles and calibration procedures comply with DIN EN ISO 9001:2015. The calibration fulfills the requirements according to DIN EN ISO 9001:2015 or other comparable quality management guidelines.

Date of Calibration: 2021-01-27

Next Calibration: 2022-01

Approved by: Andreas Böck
Laboratory Manager

Person in Charge

Philip M. Fleischmann Katharina Schreck

esz AD calibration & metrology
Max-Planck-Str. 16 D-82223 Eichenau

Report Revision: 405364-02 (Impression of previous version: 2021-01-27)
Digital copies were generated automatically and are digitally signed.



Additional Services



Drift report

- Available on customer request
- Appendix to the digital calibration certificate
- Information on deviations of the measured values compared to previous calibrations
- Risk estimation for the upcoming calibration interval
- Line by line representation for each specified measurement step

Driftbericht Erstellungsdatum 24.11.2020

esz-ID: 103109 Seriennummer: 174810342
Modell: HBM 1-P3TCP / 200 bar abs. Top Prüfmittelnummer: 3490
Class
Gegenstand: Drucksensor Inventarnummer: n.a.
Kunde: RAPA Rausch & Pausch GmbH

Die Spalten enthalten die durchschnittlichen Abweichungen zum am besten zuzuordnenden Kalibrierwert der jeweiligen Kalibrierung.

Eintrag **Erklärung**
- keine Abweichung im Rahmen der Stellenauflösung des Messwertes
n.a. keine Drift aufgrund fehlender Überschneidung der Historien Daten berechenbar
no drift keine Drift im Rahmen der Stellenauflösung des Messwertes feststellbar
max. betragsmäßig größter Wert aller Driften der ermittelten Historie
Drift vorzeichenrichtiger Mittelwert aller Driften
mittl. Drift
Bem. Bemerkung zur Risikoabschätzung
o unter Berücksichtigung der maximalen Drift liegen die zu erwartenden Werte der nächsten Folgekalibrierung außerhalb der Toleranzen
! unter Berücksichtigung sowohl der maximalen als auch der mittleren Drift liegen die zu erwartenden Werte der nächsten Folgekalibrierung außerhalb der Toleranz

Druck, Absolut-

Bereich	Einstellung	Kalibrierwert	103109-02	103109-03	max. Drift	mittl. Drift	Bem.
200 bar	0,393 mV/V	40,0 bar	0,2 bar	0,1 bar	0,10 bar	0,1 bar	
200 bar	0,3942 mV/V	80,0 bar	0,2 bar	0,1 bar	0,10 bar	-0,1 bar	
200 bar	1,1944 mV/V	120,0 bar	0,2 bar	0,2 bar	no drift	no drift	
200 bar	1,5943 mV/V	160,0 bar	0,1 bar	0,1 bar	no drift	no drift	
200 bar	1,9933 mV/V	200,0 bar	-0,1 bar	0,1 bar	0,20 bar	0,2 bar	

esz AG calibration & metrology
Max-Planck-Str. 16 D-82222 Eschenau +49-8141-88887-0 info@esz-ag.de www.esz-ag.de
Report Revision 100029 04.2 (ersetzt alle Vorversionen) Seite 1 / 1



Additional Services



Order status and calibration certificate at your fingertips

- The order status and calibration certificate can be accessed via a link in the order confirmation.
- This order information can be viewed:

Order Details

plusasset-expert.de/Order/Details?orderId=BK231735

esZ PLUS

Dashboard

Due Devices

My Orders

Quotation Requests

Search

Data

Configuration

Order Tracking Link

Home / My Orders / Order BK231735

Order: BK231735

Report Language: German

esZ Contact: Johanna Mosquera Rojeles

Customer Order: n.a.

Creation Date: 03/04/2024

Order Status: In Work

Order Progress: 100%

esZ-ID	Asset-ID	Serial No.	Manufacturer	Model	Model Type	Scheduled Cal. Date	Cal. Interval	Certificate No.	Scope	Status	Delivery Note	Download
000081	KL33017	101151013	Mahr	Mahr 1000 mm	Caliper	24/04/2024	12		DAkkS			
000486	KL20023	K-0052	Wandel & Goltermann	Wandel & Goltermann SPM-19	Level meter	24/04/2024	36		ISO			
081000	n.a.	esz-2014-02-081000	Agilent	Agilent 0.9 N.m	Torque wrench	24/04/2024	36		ISO			
081021	n.a.	39852	Huber+Suhrner	Huber+Suhrner 45 cN.m	Torque wrench	24/04/2024	36		ISO			

- Order status
- Scope of the calibration
- Shipping information with tracking number
- Download of the calibration certificates



CEPS



CEPS – Calibration Expert Partner System

- In the CEPS network contractually bound partners carry out standard-compliant, accredited calibrations in the field of Automotive testing technology and of climatic chambers in accordance with DKD-R 5-7 Method A
- No own accreditation for the measuring task with the German Accreditation Body necessary
- Qualification of technicians through regular training courses
- Benefits:
 - Calibration of the test equipment directly on site > minimal downtime
 - Creation individual calibration description with complete measurement uncertainty balance according to EA 4/02 (formerly DAkkS-DKD-3)
 - Integration of the existing service structure into the QM system in accordance with DIN EN ISO/IEC 17025:
Training and education, monitoring and supervision, audit and monitoring



Software solutions



aePLUS – Test equipment management for esz customers

- Web-based software - 24/7 location-independent data access
- Cross-company management of test equipment
- Reduced administrative effort thanks to automatic data growth
- Overview of calibration deadlines and intervals, incl. freely definable reminder function
- Complete device and calibration certificate history
- Overview of all calibration orders with filter and selection function
- Order overview with status information on individual orders
- Free of charge for all esz customers
- Registration at: <https://plus.asset-expert.de/Account/Register>



Software solutions



aePLUS

Home / My Orders

Order No. Order Status: In Work Creation Date: 05/04/2021 - 05/04/2027

Show 10 results Search in table

Customer Order No.	Order No.	Order Status	Creation Date	Certificates
	593423-01.ext	In Work	04/04/2024	Download
n.a.	BK231735	In Work	03/04/2024	Download
n.a.	BK231617	In Work	02/04/2024	Download
n.a.	BK231380	In Work	27/03/2024	Download
n.a.	BK230093	In Work	11/03/2024	Download
n.a.	BK229984	In Work	08/03/2024	Download
n.a.	es2024-03-08	In Work	08/03/2024	Download

Home / Due Devices

Overdue: Due Before: 03/04/2024 ☒ Only active devices

Show 10 results Search in table

es2-ID	Asset-ID	Serial No.	Article No.	Manufacturer	Model	Model Type	Location	Lab Location	Is External	Next Cal. Date	Cal. Interval	Scope
☐ 000057	KL18403	GB43312088	AGI-DE4419B	Agilent	Agilent E4419B	RF power meter	esz AG Eichenau		No	03/09/2022	12	DAkkS
☐ 000075	KI20015	849243/004	RS-DFSEK30	Rohde & Schwarz	Rohde & Schwarz FSEK 30	spectrum analyzer	esz AG Eichenau	HF1	No	25/07/2023	12	DAkkS
☐ 000150	000150	n.a.	FLU-Q9150	Fluke	Fluke 9150	Dry Well	esz AG Eichenau		No	02/12/2021	24	ISO



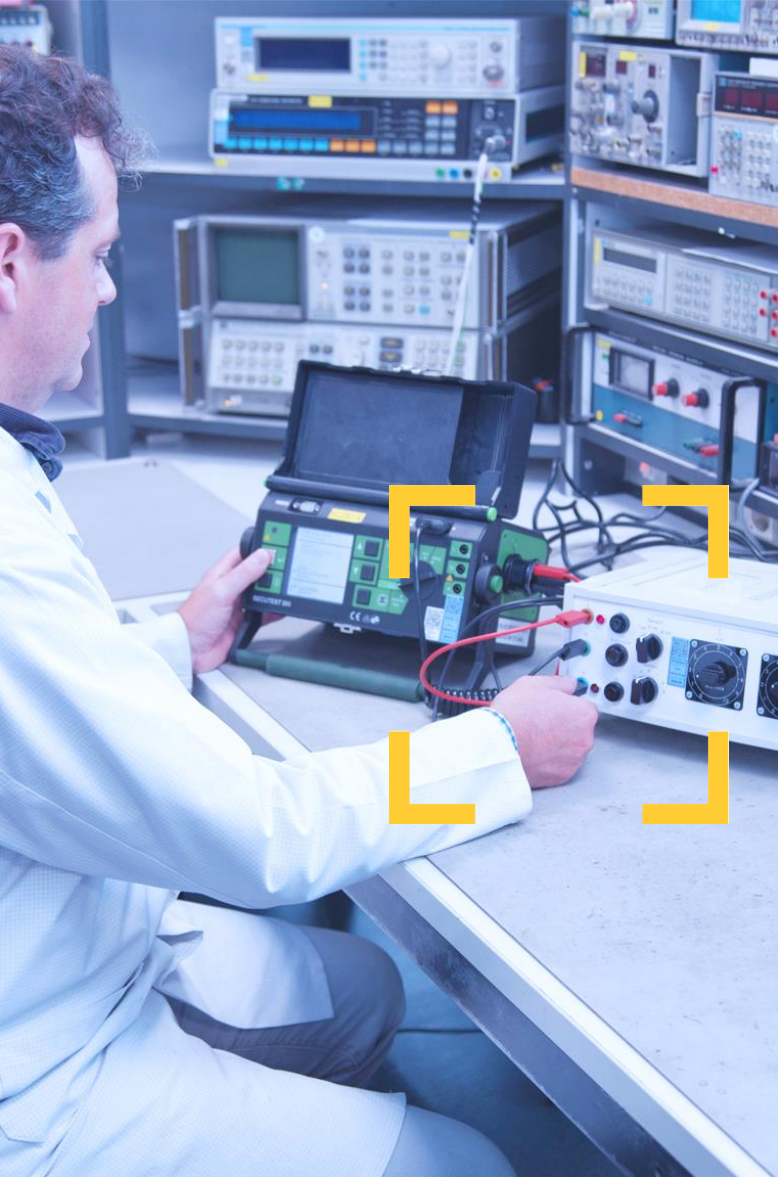
Software solutions



aePLUS – Data import

- To view the complete device and order data, it is necessary to link the personal account with the customer number data. We will provide you with a personalized activation link for this purpose.

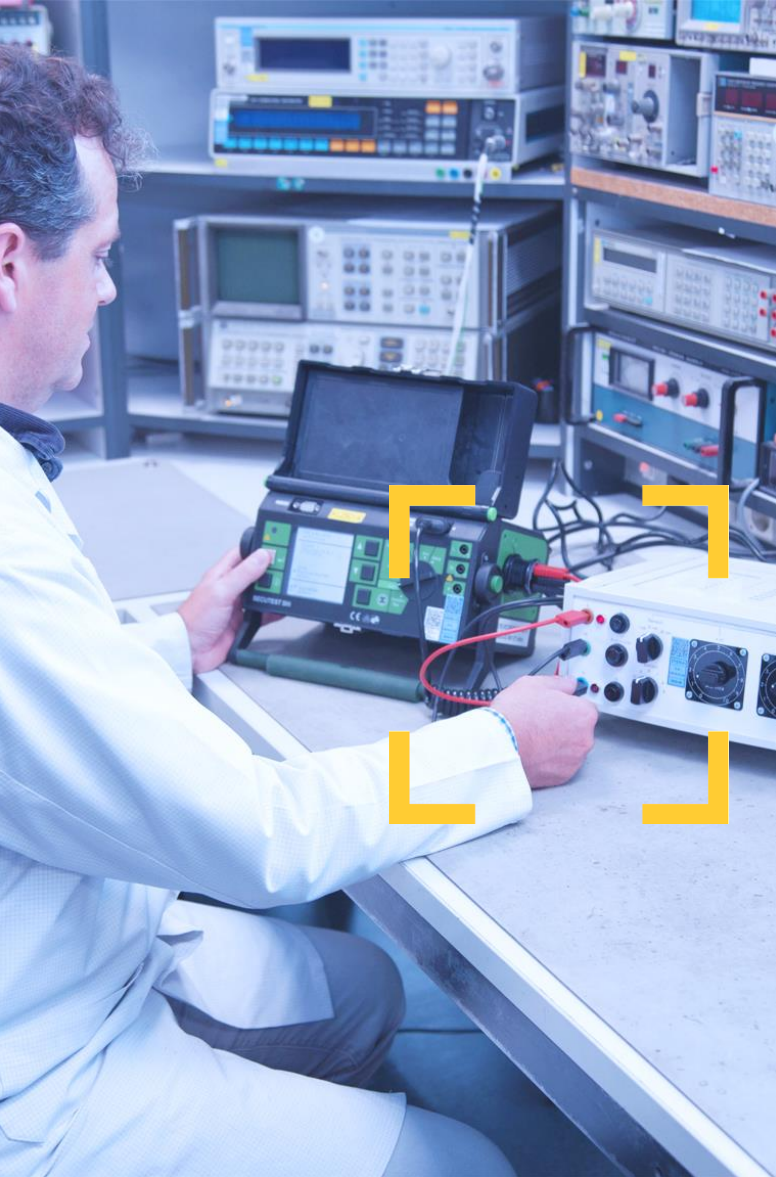
The screenshot shows the 'Load Devices' page in the aePLUS web application. The browser address bar displays 'plus.asset-expert.de/Data/LoadDevices'. The left sidebar contains a navigation menu with the following items: Dashboard, Due Devices, My Orders, Search, and Data (highlighted in yellow). The main content area is titled 'Home / Load Data' and features three tabs: 'By Order number' (selected), 'By Order tracking link', and 'By Customer access link'. Below the tabs, there are input fields for 'Order No.' and 'esz-ID', followed by a 'Search' button. A note below the search fields states: 'Two entries are necessary, Order Number and another search parameter, so that results are shown.' The bottom of the sidebar shows links for 'Load Data', 'Import', and 'Export'.



Equipment service and repair

- Manufacturer-independent repair hub
- Extensive service catalog
- Archive with over 20,000 service documents/manuals
- Service cooperation with well-known manufacturers
- Transparent cost overview for repairs
- Acceleration of repairs thanks to spare parts flat rate
- Faster order placement thanks to design certificate
- esz adjustment is only charged if 100% possible





Safety test / DGUV-V3

- Manufacturer-independent safety testing of electrical measuring equipment according to DGUV V3 as part of the calibration order or as an individual order.
- Safety tests of electrical equipment in three sections according to the DGUV V3 test protocol:
 - visual inspection
 - functional test
 - measurement check
- Legally compliant test protocol
- Marking of the device with test sticker





Service



Consulting

- Feasibility check for metrological projects
- Calibration procedure descriptions and measurement uncertainty budgets
- Implementation in calibration expert
- Training of esz departments and external partners
- Development of calibration procedures and measuring stations for esz AG
- Accreditation sharing and authorization network coordination for external organisations



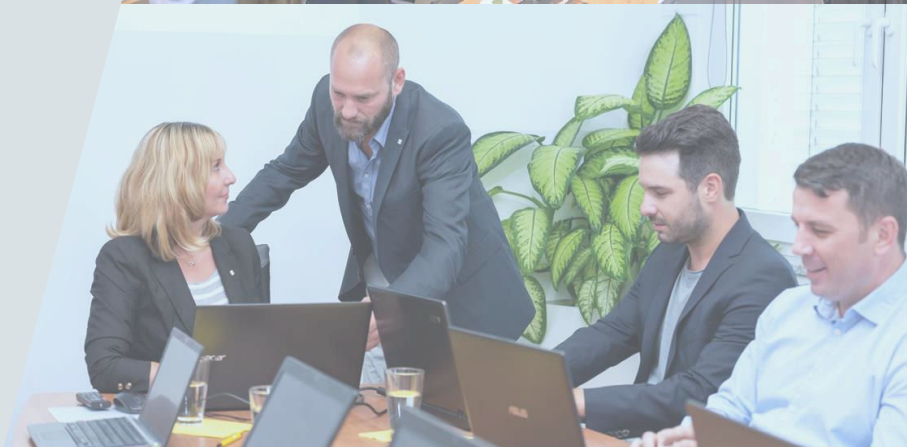


Service



Trainings

- esz competence training
- Seminars
- Trainings
- Employee trainings
- Symposium: Munich Calibration Day





Service



Logistik Expert / On-site

- Professional pick-up and transport service in Germany, Austria, Hungary, Poland and Benelux
- Short downtimes
- Trained specialist personnel
- Own equipment-specific transport packaging
- Transport insurance
- Daily delivery routes
- Cost transparency for on-site service
- Onsite calibration at the customer's location:
 - at the customer's premises
 - in own laboratory containers

[Click here](#) for the detailed list of delivery routes

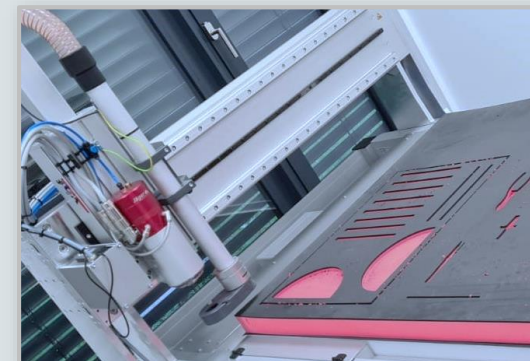




Storage and transport solutions

Best for tools, test equipment and other items

- Development and production of storage systems for any desired tool or device
- Individually milled foam boards (Shadow Boards)
- Laser engraving of tools, mats, cases
- Equipped TCS according to your specifications
- Shadow boards available in an ESD version on request.



The plus in safety in workshops and on the road

- Efficient, mobile and individual solutions for all industries
- Uncompromising security thanks to optimal storage solutions
- Avoidance of Foreign Object Damage e.g. during aircraft maintenance



Safety

needs **confidence.** We make
confidence **measurable.**

For today's **decisions**
and **products**
for the **future.**